R E P O R T R E S U M E S

ED 021 043 VT 002 803

VOCATIONAL AGRICULTURE TEACHER MORALE STUDY--A COMPARISON OF SELECTED FACTORS IN SCHOOLS WHERE THE MORALE OF VOCATIONAL AGRICULTURE TEACHERS IS "HIGH" WITH SCHOOLS WHERE THE MORALE OF VOCATIONAL AGRICULTURE TEACHERS IS "LOW".

BY- BENTLEY, RALPH R. REMPEL, AVERNO M.
PURDUE UNIV., LAFAYETTE, IND., DIV. OF EDUCATION

PUB DATE FEB 63

EDRS PRICE MF-$0.25 HC-$2.12 51P.

DESCRIPTORS- *VOCATIONAL AGRICULTURE TEACHERS, TEACHER CHARACTERISTICS, *STUDENT ATTITUDES, STUDENT PROBLEMS, ACADEMIC APTITUTDE, *TEACHER MORALE, ANALYSIS OF VARIANCE, FACTOR ANALYSIS,

A STUDY WAS UNDERTAKEN TO DETERMINE WHETHER DIFFERENCES EXISTED WITH RESPECT TO STUDENT ATTITUDE TOWARD THEIR TEACHER, FEELINGS ABOUT SCHOOL WORK PROBLEMS, AND ACADEMIC APTITUDE BETWEEN VOCATIONAL AGRICULTURE DEPARTMENTS IN WHICH TEACHER MORALE WAS HIGH AND THOSE IN WHICH TEACHER MORALE WAS LOW. THE TEACHER SAMPLE INCLUDED 21 WITH THE HIGHEST MORALE AND 21 WITH THE LOWEST MORALE OF 263 INDIANA VOCATIONAL AGRICULTURE TEACHERS WHO RESPONDED TO THE PURDUE TEACHER MORALE INVENTORY. DIFFERENCES IN TEACHER GROUP CHARACTERISTICS WERE AGE, EDUCATION, EXPERIENCE, ASSIGNMENT, TENURE, SALARY, SATISFACTION, AND OPTIMISM. THERE WAS SIGNIFICANT DIFFERENCE BETWEEN THE TWO GROUPS' RESPONSE TO THE VOCATIONAL AGRICULTURE VIEWPOINT INQUIRY, BUT NONE BETWEEN THE HIGH SCHOOL PRINCIPALS OF THE TWO GROUPS. THE MINNESOTA STUDENT ATTITUDE INVENTORY (MSAI), SCIENCE RESEARCH ASSOCIATE (SRA) YOUTH INVENTORY, AND THE LORGE-THORNDIKE INTELLIGENCE TEST WERE ADMINISTERED TO THE AGRICULTURE STUDENTS OF TEACHERS IN THE SAMPLE. DATA SUBJECTED TO AN ANALYSIS OF VARIANCE AND A FACTORIAL DESIGN SHOWED THAT MASI SCORES WERE HIGHEST FOR STUDENTS WITH HIGH IQ OF TEACHERS WITH HIGH MORALE. NO SIGNIFICANT DIFFERENCES WERE FOUND BETWEEN STUDENTS OF HIGH MORALE AND THOSE OF LOW MORALE TEACHERS ON MEAN SRA SCORES, BUT DIFFERENCES RELATED TO THE RURAL-URBAN FACTOR AND GRADE LEVEL WERE FOUND. THE IQ LEVEL PLAYED AN IMPORTANT ROLE IN ALL COMPARISONS. (JM)

ED021043

PURDUE UNIVERSITY

STUDIES IN EDUCATION

No. 1 - 1963

VOCATIONAL AGRICULTURE

TEACHER MORALE STUDY

VT 002803

DEPARTMENT OF EDUCATION
Purdue University

in cooperation with

Division of Vocational Education
Indiana State Department of Public Instruction

VOCATIONAL AGRICULTURE TEACHER MORALE STUDY

A Comparison of Selected Factors in Schools Where the Morale of Vocational Agriculture Teachers is 'High' with Schools Where the Morale of Vocational Agriculture Teachers is 'Low.'

By

Ralph R. Bentley

Associate Professor of Agricultural Education

Averno M. Rempel

Associate Professor of Education

Department of Education
Purdue University

in cooperation with

Division of Vocational Education
Indiana State Department of Public Instruction

February 1963

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

TABLE OF CONTENTS

Page

INTRODUCTION 1

BACKGROUND OF THE STUDY 2

PURPOSE OF THE STUDY 3

PROCEDURES 3

The Teacher Sample 3

The Student Sample 8

Collection of Basic Data 9

Testing Procedures 9

Analysis of Data 9

RESULTS 11

Minnesota Student Attitude Inventory (MSAI) 11

SRA Youth Inventory (My School Section) 25

Academic Aptitude 33

SUMMARY AND CONCLUSIONS 36

APPENDIX

A. Vocational Agriculture Viewpoint Inventory 38

B. Personal Data Form 40

C. Means and Standard Deviations of MSAI Scores for Students of "High" and of "Low" Morale Teachers by Schools 42

D. Means and Standard Deviations of SRA Youth Inventory (My School Section) Scores for Students of "High" and of "Low" Morale Teachers by Schools 43

E. Means and Standard Deviations of IQ Scores for Students of "High" and of "Low" Morale Teachers by Schools 44

ACKNOWLEDGMENTS

The authors wish to express their appreciation to those individuals whose cooperation made this study possible. We wish to thank the school administrators who permitted the collection of data in their schools and helped to make arrangements for its collection, to the guidance persons who so capably administered the tests, and to the teachers who so willingly agreed to permit their vocational agriculture students to be tested.

We also extend our sincere thanks to W.A. Williams, State Director of Vocational Education, and to Harold B. Taylor, State Supervisor of Agricultural Education, for their interest in and support of this research project.

Special acknowledgment is certainly due our statistical consultants, Mrs. Carolyn C. Wheeler and Mrs. Betty Havlicek, and to our typist, Miss Ruth Masterson.

LIST OF TABLES

Table		Page
I	Morale Scores for "High" and "Low" Teacher Morale Groups	4
II	Comparison of Personal Data for "High" and "Low" Morale Teachers	5
III	Vocational Agriculture Viewpoint Inquiry Mean Scores for Vocational Agriculture Teachers and Their Principals According to "High" and "Low" Teacher Morale Groups	7
IV	Distribution of Boys Enrolled in Vocational Agriculture by Grades in Schools Where "High" and "Low" Morale Teachers are Employed	8
V	Distribution of Vocational Agriculture Students According to Size of Home Farm in Schools Where "High" and "Low" Morale Teachers are Employed	8
VI	Summary of Analysis of Variance for Minnesota Student Attitude Inventory Mean Scores	12
VII	Mean MSAI Scores for Students of "High" and of "Low" Morale Teachers According to School Grades and Level of IQ	13
VIII	Mean MSAI Scores for Students of "High" and of "Low" Morale Teachers According to Rural-Urban School Groupings and Level of IQ	17
IX	Percentages and Chi-Squares for Responses of Students of "High" and of "Low" Morale Teachers for Minnesota Student Attitude Inventory Items	20
X	Summary of Analysis of Variance for SRA (My School Section) Score Means	26
XI	Mean SRA Scores for Students of "High" and of "Low" Morale Teachers According to School Grades and Level of IQ	27
XII	Mean SRA Scores for Students of "High" and of "Low" Morale Teachers According to Rural-Urban School Grouping and Level of IQ	30
XIII	Summary of Analysis of Variance of IQ Score Means	33
XIV	Mean IQ Scores for Students of "High" Morale and of "Low" Morale Teachers According to School Grades	34
XV	Mean IQ Scores for Students of "High" and of "Low" Morale Teachers According to Rural-Urban School Grouping	34

LIST OF FIGURES

Figure		Page
I	Mean MSAI Scores for Students of "High" and of "Low" Morale Teachers According to School Grades	14
II	Mean MSAI Scores for Students of "High" and of "Low" Morale Teachers According to Level of IQ	14
III	Mean MSAI Scores for Students of "High" and of "Low" Morale Teachers According to School Grades and Level of IQ	15
IV	Mean MSAI Scores for Students of "High" and of "Low" Morale Teachers According to Rural-Urban School Groups	18
V	Mean MSAI Scores for Students of "High" and of "Low" Morale Teachers According to Rural-Urban School Groups and Level of IQ	19
VI	Mean SRA Scores for Students of "High" and of "Low" Morale Teachers According to School Grades	28
VII	Mean SRA Scores for Students of "High" and of "Low" Morale Teachers According to Level of IQ	28
VIII	Mean SRA Scores for Students of "High" and of "Low" Morale Teachers According to School Grades and Level of IQ	29
IX	Mean SRA Scores for Students of "High" and of "Low" Morale Teachers According to Rural-Urban School Groups	31
X	Mean SRA Scores for Students of "High" and of "Low" Morale Teachers According to Rural-Urban School Groups	32
XI	Mean IQ Scores for Students of "High" and of "Low" Morale Teachers According to School Grades	35
XII	Mean IQ Scores for Students of "High" and of "Low" Morale Teachers According to Rural-Urban School Groups	35

VOCATIONAL AGRICULTURE TEACHER MORALE STUDY

"A Comparison of Selected Factors in Departments of Vocational Agriculture Where the Morale of the Teachers is 'High' With Departments Where the Morale of Vocational Agriculture Teachers is 'Low.'"

I. INTRODUCTION

It is generally assumed that teacher morale is an important factor in achieving desirable educational outcomes. School authorities and others have been concerned about teacher welfare and adjustment to the school and community because of the assumed importance attached to the influence of teacher morale on student attitudes and student learning.

This seems to be a reasonable hypothesis. Satisfaction of the felt needs of teachers would appear to be intimately bound up with the satisfaction of the felt needs of students. The creative, personal nature of the teaching process would seem to require a feeling of satisfaction with the total school environment on the part of the teacher. Yet, actual evidence confirming this hypothesis is limited. Only a few studies have been focused on this problem.

An increasing number of studies have been designed to determine the effect of such factors as school district reorganization, school facilities, and instructional materials on educational outcomes. However, it might well be argued that the teacher is the key factor in the learning situation. Too little is known about the effect of the teacher's attitudes and feelings on the learner. More specifically, is the teacher's morale an important factor in the learning situation? Do the feelings of teachers about their work and the school-community environment influence student attitudes and achievement?

In an attempt to improve the quality of the learning experiences that the school provides, answers to such questions are important. Greater insight is needed into the various ways and the degrees to which teacher attitudes and feelings influence student attitudes regarding the teacher and the learning situation.

II. BACKGROUND OF THE STUDY

For the last three years, a series of studies pertaining to teacher morale have been conducted by the Department of Education at Purdue University. In the first study, the Purdue Teacher Morale Inventory[1] was developed, designed to measure teacher morale. The instrument was then used to study the relationship of certain selected factors to the morale of about 500 teachers in 22 Indiana high schools. A similar project was conducted with vocational agriculture teachers in Indiana.[2]

In these studies it was found that morale scores for teachers varied greatly and it was possible to identify teachers having extremely "high" morale and teachers having extremely "low" morale. The identification of teachers differing greatly with respect to morale sugtested that other differences might exist in the schools and classrooms in which these teachers were employed.

The findings of the above studies and their possible implications were discussed with the State Director of Vocational Education and members of his staff. These discussions led to the development of a research proposal involving teachers of vocational agriculture which was submitted to the State Board of Vocational Education. Funds were made

---

[1] Data concerning the validity and reliability of the instrument are given in the Manual for the Purdue Teacher Morale Inventory, The University Book Store, 310 State Street, West Lafayette, Indiana.

[2] This study was conducted in cooperation with the Research Committee of the Indiana Vocational Agriculture Teachers' Association.

available making it possible to conduct the study that was proposed.

III. PURPOSE OF THE STUDY

The main purpose of the study was to determine whether significant differences exist with respect to selected factors in departments of vocational agriculture where the morale of the teachers was "high" and those where the morale of the teachers was "low." Specifically, the factors selected for study were:

1. Student attitudes regarding their vocational agriculture teachers.
2. Student feelings about the extent and intensity of problems related to their school work.
3. Student academic aptitude.

IV. PROCEDURES

A. The Teacher Sample

Two groups of 25 agriculture teachers were tentatively selected on the basis of their level of morale. One group consisted of teachers whose morale scores were among the highest of 263 teachers who responded to the Purdue Teacher Morale Inventory during the spring of 1961. The other group consisted of those whose morale scores were among the lowest. Only teachers were included in the study who held the same position in 1961-62 as they held the previous year and who did not have marked changes in their morale scores between 1961 and 1962. It might be pointed out that these teachers were fairly evenly distributed throughout the state.

The 42 teachers finally selected, 21 "high" morale and 21 "low" morale, together with their 1961 and 1962 morale scores, are shown in Table I.

TABLE I.

MORALE SCORES FOR "HIGH" AND "LOW" TEACHER MORALE GROUPS

"High" Morale Group			"Low" Morale Group		
Teacher Code	Morale Scores by Years 1961	1962	Teacher Code	Morale Scores by Years 1961	1962
2	92	93	1	28	29
3	121	120	5	24	64
7	120	109	6	29	53
8	92	92	9	9	39
10	132	137	11	21	60
18	91	141	12	28	24
19	92	93	13	25	15
20	111	109	16	16	32
23	92	87	22	18	6
25	104	84	26	25	11
27	97	84	29	19	14
33	117	129	32	12	14
34	111	127	35	26	24
37	113	138	36	17	54
38	136	123	39	19	71
40	111	110	41	15	21
42	99	98	46	29	13
43	100	113	48	30	56
45	100	114	53	30	51
47	116	101	15	29	39
54	89	99	60	30	43
Mean =	107.48	109.57	Mean =	22.76	34.76
S.D. =	3.11	4.05	S.D. =	1.46	4.65

Although the teachers included in this study were selected and grouped entirely on the basis of their morale scores, other available information[1] regarding them indicate clearly that the "high" and the "low" teacher morale groups differed with respect to several factors other than morale. A summary of this information is given in Tables II and III.

TABLE II.

Comparison of Personal Data
For "High" and "Low" Morale Teachers

A. Age

Level of Morale	N	Age in Years: Less than 31	31-40	41-50	More than 50
		%	%	%	%
"High"	21	24	29	33	14
"Low"	21	33	24	29	14

B. Education

Level of Morale	N	Level of Education: B.S. Degree	B.S. Degree and 12 Sem. Hrs.	M.S. Degree or More
		%	%	%
"High"	21	14	29	57
"Low"	21	29	19	52

C. Teaching Experience

Level of Morale	N	Years of Teaching Experience: Less than 6	6-14	15-24	More than 24
		%	%	%	%
"High"	21	19	33	38	10
"Low"	21	43	33	10	14

D. Percentage of School Day Devoted to Vocational Agriculture According to Rural-Urban School Groups

Level of Morale	N	More Than 50% Rural	30-50% Rural	Less Than 30% Rural
		%	%	%
"High"	21	71	70	64
"Low"	21	64	66	49

[1] Obtained from State Department of Public Instruction Reports, Vocational Agriculture Viewpoint Inquiry (see Appendix A), and Personal Data Form (see Appendix B).

E. Number of Years in Present Position

Level of Morale	N	Less Than 5 Years	5-10 Years	More Than 10 Years
		%	%	%
"High"	21	33	24	43
"Low"	21	52	24	24

F. Tenure Status

Level of Morale	N	Tenure	
		Yes	No
		%	%
"High"	21	43	57
"Low"	21	10	90

G. Annual Salary

Level of Morale	N	Mean Salary by Years		
		1959-60	1960-61	1961-62
"High"	21	$6849	$7469	$7846
"Low"	21	$6204	$6608	$6869

H. Satisfaction with Present Position

Level of Morale	N	A[1]	B[2]	C[3]	D[4]
		%	%	%	%
"High"	21	95	5	0	0
"Low"	21	24	52	19	5

A[1] Thoroughly satisfied; no desire to change.
B[2] Satisfied but would consider a change.
C[3] Somewhat dissatisfied; would change if I could.
D[4] Thoroughly dissatisfied.

I. Future of Vocational Agriculture in Indiana is Encouraging

Level of Morale	N	Strongly Agree	Probably Agree	Probably Disagree	Strongly Disagree
		%	%	%	%
"High"	21	71	10	14	5
"Low"	21	14	52	19	14

J. If Starting College Work Over Again, Would Choose to Specialize in Agricultural Education

Level of Morale	N	Yes	Uncertain	No
		%	%	%
"High"	21	57	29	14
"Low"	21	48	19	33

The percentages shown in Table II indicate that the "high" morale teachers when compared with the "low" morale teachers were somewhat older; had more education; had more teaching experience; devoted a larger proportion of their school day to teaching vocational agriculture; were employed more years in their present teaching positions; were more likely to have tenure status, and had higher annual salaries. The "high" morale group also indicated a higher degree of satisfaction with their present positions, believed more strongly that the future of vocational agriculture in Indiana was encouraging, and were more likely to choose a career in Agricultural Education if they were starting their college work over again.

Information obtained when the Vocational Agriculture Viewpoint Inquiry was administered to the agriculture teachers showed that the "high" morale group responded more favorably than did the "low" morale group to basic issues pertaining to vocational agriculture. However, when the above mentioned instrument was administered to the high school principals of the two teacher groups, their mean responses were not significantly different. (See Table III.)

TABLE III.

Vocational Agriculture Viewpoint Inquiry Mean Scores for Vocational Agriculture Teachers and Their Principals According to "High" and "Low" Teacher Morale Groups

	Teacher Morale Groups "High"		"Low"			
	Mean	S.D.	Mean	S.D.	Mean Diff.	t
Vocational Agriculture Teachers	68.33	5.45	63.40	5.71	4.93	P <.05
School Principals	58.90	12.73	59.15	7.07	.25	NS

B. The Student Sample

The student sample consisted of all the students enrolled in the vocational agriculture classes taught by the teachers included in this study. In all cases there were some students in each of the four high school grades. The percentage distribution of the vocational agriculture students by grades in schools where the "high" morale and "low" morale teachers were employed was not significantly different. (See Table IV.)

TABLE IV.

Distribution of Boys Enrolled in Vocational Agriculture by Grades in Schools Where "High" and "Low" Morale Teachers are Employed

Morale Group	Number of Boys	Percentage Distribution by Grades 9	10	11	12
		%	%	%	%
"High"	972	32.20	26.03	20.47	21.30
"Low"	780	32.05	26.03	20.64	21.28

Neither was there a significant difference in the percentage distribution of these two groups of students with respect to the size of their home farms. (See Table V.)

TABLE V.

Distribution of Vocational Agriculture Students According to Size of Home Farm in Schools Where "High" and "Low" Morale Teachers are Employed

Morale Group	Number of Students	Percentage Distribution by Size of Home Farm More Than 240 Acres	141-240 Acres	10-140 Acres	Less Than 10 Acres
		%	%	%	%
"High"	972	17.70	21.91	38.58	21.81
"Low"	761	22.60	21.42	31.80	24.15

C. Collection of Basic Data

The following instruments were used to collect data regarding the students in each of the vocational agriculture classes taught by the teachers in the study.

a. The Minnesota Student Attitude Inventory (MSAI) -- to determine the attitudes of students regarding their vocational agriculture teacher.

b. The SRA Youth Inventory (My School Section) -- to measure the attitudes of the students about the extent and intensity of problems related to their school work.

c. The Lorge-Thorndike Intelligence Test (Verbal Form)-- to measure the academic aptitude of the students.

D. Testing Procedures

The tests and inventories were administered by the local staff person usually assigned to school testing in each of the cooperating schools. Arrangements for test administration were made through a personal visit by one of the project directors. In all cases the principal, the person in charge of testing (usually the director of guidance), and the vocational agriculture teacher were contacted in order to reach a mutual understanding of the testing procedures which were to be used.

In some cases, the Lorge-Thorndike Intelligence Test was administered by the agriculture teacher. However, in all cases the MSAI and the SRA Youth Inventory were handled by some person other than the agriculture teacher.

E. Analysis of Data

Analysis of variance procedures were used to determine whether significant differences existed in the mean MSAI and mean SRA Youth Inventory

scores in "high" and "low" teacher morale situations. Other factors taken into account in the analysis were grade level, level of IQ, and the rural-urban composition of the high school.

A 2x3x4x3 factorial design was used to test the main effects and interactions of the four factors listed above, using MSAI scores and SRA Youth Inventory scores as criterion measures. The treatment combinations in the factorial experiment are represented schematically as follows:

Rural-Urban School Groups ⟶		"High" Morale			"Low" Morale		
Grade	Level of IQ	1	2	3	4	5	6
	High	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$
9	Med.	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$
	Low	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$
	High	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$
10	Med.	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$
	Low	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$
	High	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$
11	Med.	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$
	Low	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$
	High	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$
12	Med.	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$
	Low	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$	$\bar{Y}_c$

All factors in the experiment were fixed with the rural-urban factor being nested under the morale factor. The experiment was carried out using the MSAI scores and SRA Youth Inventory scores as criterion measures. Rural-urban groupings were based on the percentage of the

total boys in the high school who were farm boys — groups one and four, more than 50 per cent farm boys; groups two and five, 30 to 50 per cent farm boys; groups three and six, less than 30 per cent farm boys. The three IQ levels set up on the basis of IQ scores were "high," more than 105; "middle," 95 to 105; and "low" less than 95.

V. RESULTS

A. Minnesota Student Attitude Inventory

The summary of the analysis of variance, using the 2x3x4x3 factorial design described previously, is given in Table VI. The analysis reveals that a significant difference exists between the MSAI mean score for the students of teachers in the "high" morale group and the mean score for the students of teachers in the "low" morale group. Differences are also significant when mean scores are compared for different levels of intelligence. Differences across grades are non-significant. None of the interactions tested are significant.

Table VII presents the mean MSAI scores for students of "high" and of "low" morale teachers by grade and level of IQ. It can be seen, then, when comparisons are made by grade, without respect to IQ, that the ninth grade students of "low" morale teachers react more favorably to their teachers than the ninth grade students of "high" morale teachers. However, in the other three grades, students of "high" morale teachers react more favorably with the greatest difference in MSAI mean scores between the two groups occurring in the twelfth grade. The grade comparison is shown graphically in Figure I.

In Figure II, a graphical comparison is made of MSAI scores according to level of IQ, but without respect to grades. For each drop in the level of IQ, there is a corresponding drop in mean MSAI scores. This holds true for the students of both "high" and of "low" morale teachers.

A comparison of mean MSAI scores for students of "high" and "low" morale teachers and level of IQ is presented in Figure III.

TABLE VI.

Summary of Analysis of Variance
For Minnesota Student Attitude Inventory Mean Scores

Source	d.f.	SS	MS	F	
Grades	3	483.12	161.04	2.37	NS
Morale	1	284.89	284.89	4.20	$P < .05$
School Group Within Morale	4	1314.86	328.72	4.84	$P < .05$
Grades x Morale	3	399.40	133.13	1.96	NS
Grades x School Group Within Morale	12	960.95	80.08	1.18	NS
IQ	2	935.01	467.54	6.89	$P < .05$
Grades x IQ	6	186.80	31.13	0.46	NS
Morale x IQ	2	37.73	18.86	0.28	NS
School Group Within Morale x IQ	8	571.14	71.39	1.05	NS
Grades x Morale x IQ	6	148.02	24.67	0.36	NS
Grades x School Group Within Morale x IQ	24	1,925.90	80.24	1.18	NS
Error	1467	1,362,913.60*	929.0481	$S_{\bar{x}}^2 = 67.8439$	
Total	1538				

* Per Observation Basis-- $\bar{n}_h = \frac{72}{5.2578} = 13.6939$

For all three IQ levels, the students of "low" morale teachers begin with somewhat higher MSAI scores in the ninth grade. In the other grades, for all IQ levels, the advantage shifts to the students of "high" morale

teachers and becomes greatest in the twelfth grade. In some instances the MSAI scores for students in the "medium" IQ group are higher than the corresponding scores for the students in the "high" IQ group.

TABLE VII.

Mean MSAI Scores for Students of "High" and of "Low" Morale Teachers According to School Grades and Level of IQ

Students of "High" Morale Teachers

Level of IQ	Grades 9	10	11	12	All Students
"High"	237.69 (77)*	236.79 (45)	229.54 (291)	236.78 (32)	235.20 (183)
"Medium"	231.44 (152)	232.51 (132)	232.23 (95)	232.00 (90)	232.04 (469)
"Low"	227.50 (51)	226.40 (43)	224.40 (47)	231.55 (35)	227.46 (176)
All Students	232.21 (280)	231.90 (220)	228.72 (171)	233.44 (157)	231.57 (828)

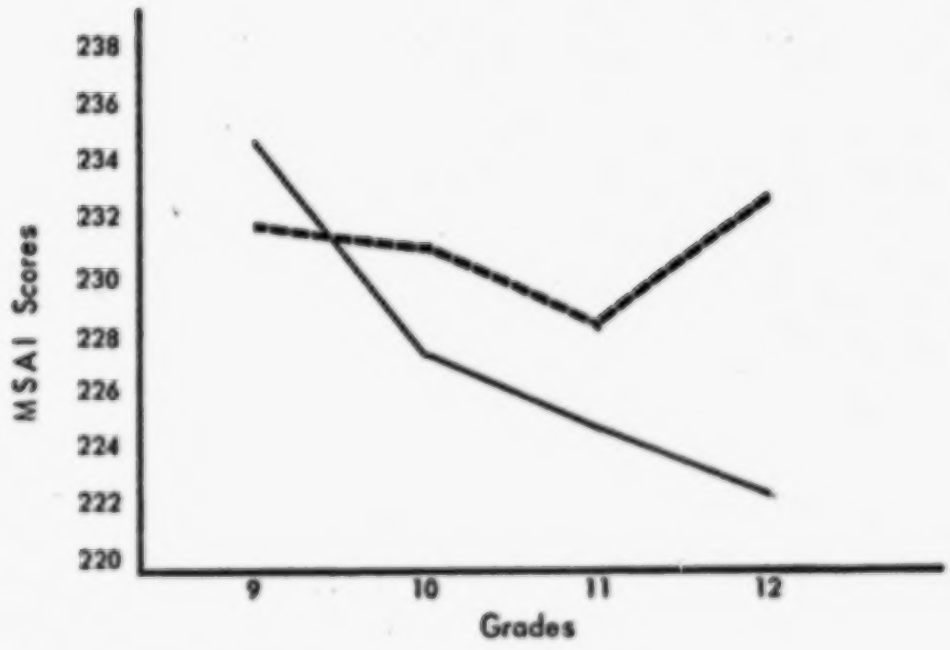
Students of "Low" Morale Teachers

Level of IQ	Grades 9	10	11	12	All Students
"High"	241.86 (49)	231.84 (35)	224.83 (13)	225.64 (27)	231.04 (124)
"Medium"	234.66 (123)	227.14 (98)	228.68 (86)	229.20 (85)	229.22 (392)
"Low"	228.50 (58)	224.57 (47)	220.22 (51)	213.93 (39)	221.81 (195)
All Students	235.01 (230)	227.85 (180)	224.58 (150)	222.92 (151)	227.59 (711)

* Numbers in parentheses indicate the number of students.

FIGURE I

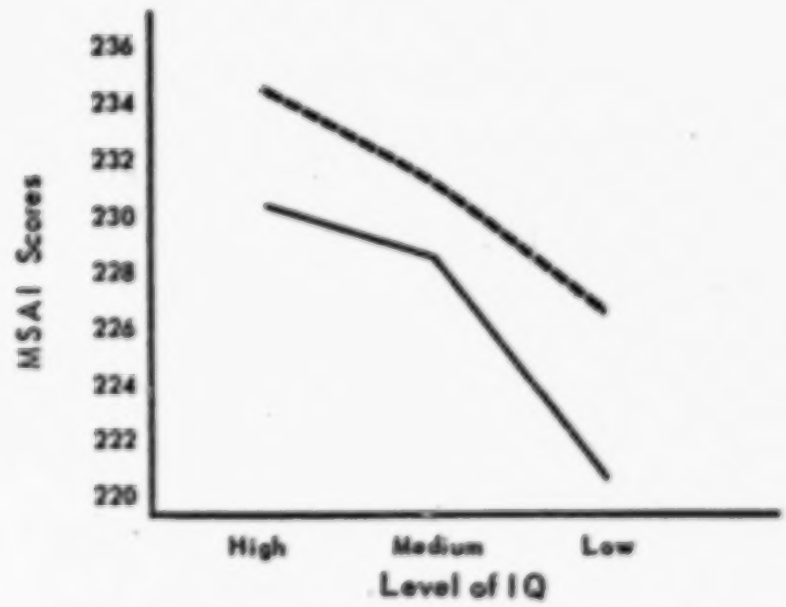
Mean MSAI Scores for Students of "High" and of "Low" Morale Teachers According to School Grades



KEY: Morale _____ "High"
_____ "Low"

FIGURE II

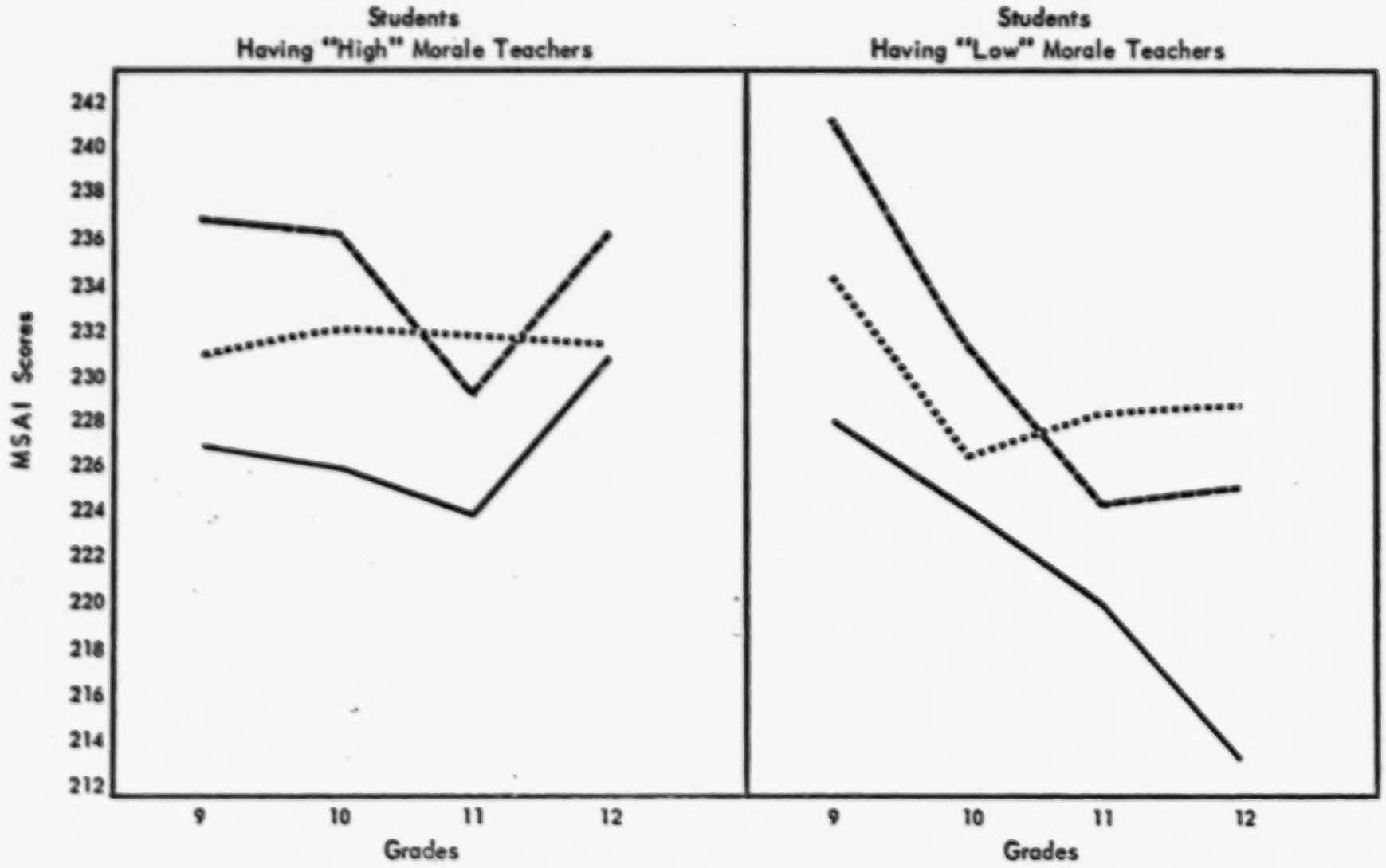
Mean MSAI Scores for Students of "High" and of "Low" Morale Teachers According to Level of IQ



KEY: Morale _____ "High"
_____ "Low"

FIGURE III

Mean MSAI Scores for Students of "High" and of "Low" Morale Teachers
According to School Grades and Level of IQ



KEY: Levels of IQ ———— "High"
..... "Medium"
———— "Low"

The extent to which the high schools in the study were rural, as indicated by the percentage of boys that were farm boys, was used as another basis of comparison. In Table VIII the mean MSAI scores are compared for students of "high" and of "low" morale teachers according to the rural-urban groupings and levels of IQ. A graphical presentation of MSAI mean scores for each of the rural-urban groups is made in Figure IV. It can be seen that for both "high" and "low" teacher morale groups this score was highest for the "30 to 50 per cent rural" group and lowest for the "less than 30 per cent rural" group. This is true when the same comparisons are made for each IQ level, particularly for the students of "low" morale teachers (see Figure V). However, the "medium" IQ group shows some overlap with both of the other IQ groups.

In general, differences in mean MSAI scores differed significantly with respect to the rural-urban groupings within each of the teacher morale categories (Table VIII).

Table IX presents the 62 MSAI items, the percentages of responses by item for students of "high" and of "low" morale teachers, and those items where there are significant differences between the responses of the students of the two teacher morale groups. Statistically significant differences were found to exist for 18 items and in each instance the difference was favorable to the "high" morale teachers. Although the observed differences for the remaining 44 items were not significant, it should be noted that, in general, student responses showed a definite tendency to favor the "high" morale teachers. The following items were among those that elicited significantly more favorable student responses for "high" morale teachers:

TABLE VIII.

Mean MSAI Scores for Students of "High" and of "Low" Morale Teachers According to Rural-Urban School Groupings and Level of IQ

Students of "High" Morale Teachers

Level of IQ	Rural-Urban School Groups: More Than 50% Rural	30-50% Rural	Less Than 30% Rural	All Students
"High"	235.12 (54)*	235.21 (78)	235.26 (51)	235.20 (183)
"Medium"	235.73 (153)	235.30 (213)	225.10 (103)	232.04 (469)
"Low"	228.68 (66)	229.32 (84)	224.39 (26)	227.57 (176)
All Students	233.18 (273)	233.28 (375)	228.25 (180)	231.57 (828)

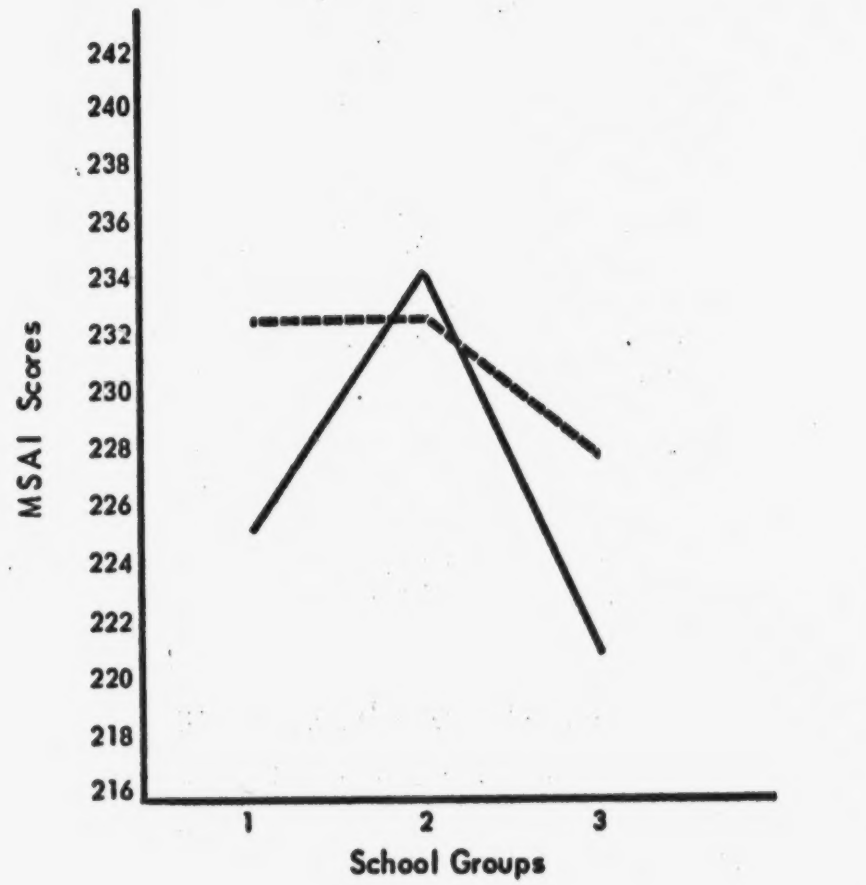
Students of "Low" Morale Teachers

Level of IQ	Rural-Urban School Groups: More Than 50% Rural	30-50% Rural	Less Than 30% Rural	All Students
"High"	228.45 (33)	242.34 (38)	222.45 (53)	231.04 (124)
"Medium"	232.94 (103)	235.63 (63)	221.19 (159)	229.22 (325)
"Low"	216.38 (36)	227.40 (130)	221.64 (96)	221.81 (262)
All Students	225.93 (172)	235.09 (231)	221.76 (308)	227.59 (711)

* Numbers in parentheses indicate the number of students.

FIGURE IV

Mean MSAI Scores for Students of "High" and of "Low" Morale Teachers According to Rural-Urban School Groups

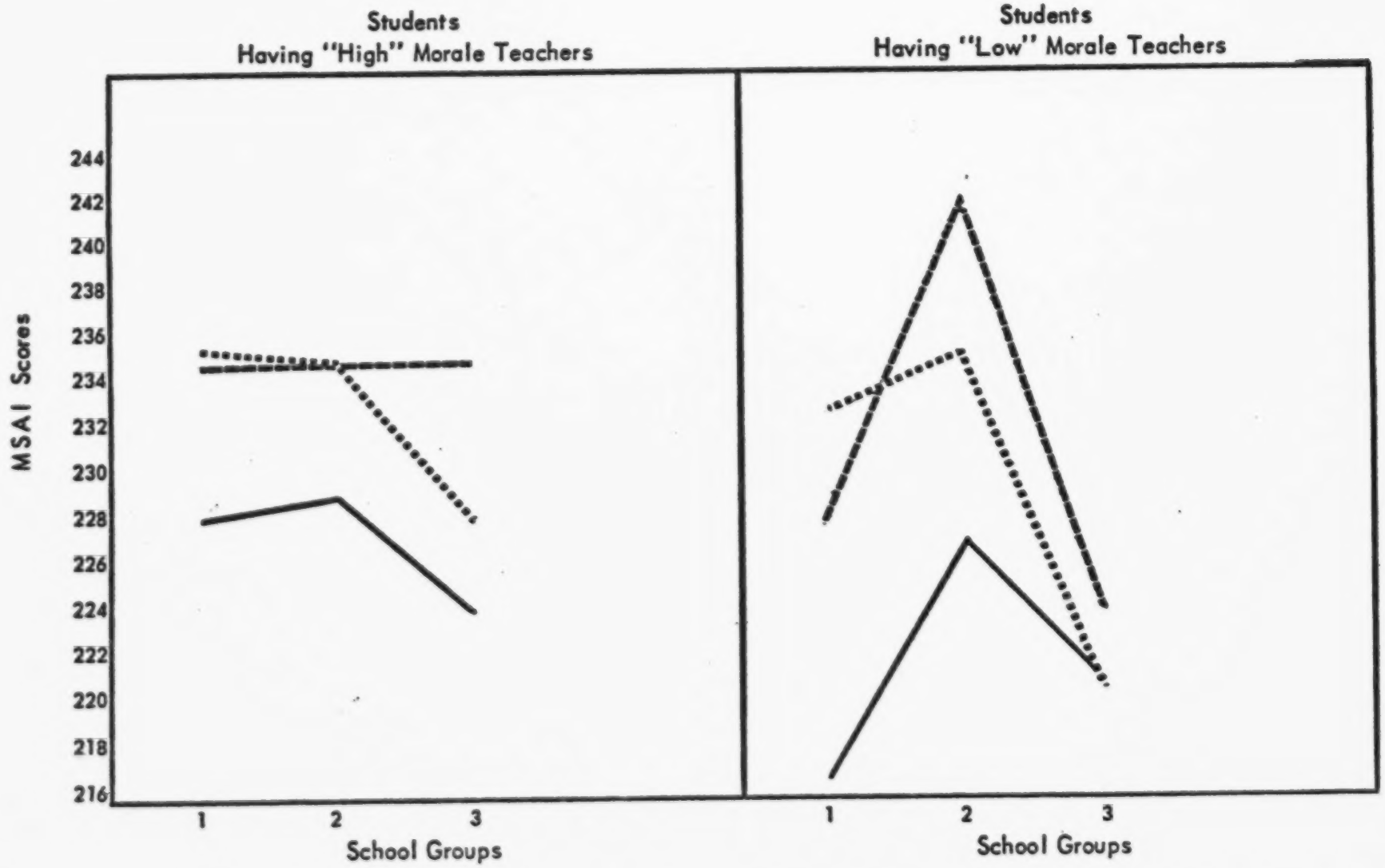


KEY: School Groups
1. More than 50% Rural
2. 30 to 50% Rural
3. Less than 30% Rural

Morale ---------- "High"
_____ "Low"

FIGURE V

Mean MSAI Scores for Students of "High" and of "Low" Morale Teachers
According to Rural-Urban School Groups and Levels of IQ



KEY: School Groups 1. More than 50% Rural 2. 30 to 50% Rural 3. Less than 30% Rural

Levels of IQ ——— "High"
..... "Medium"
——— "Low"

"This teacher makes careful plans for each day's work."

"This teacher is cool and calm."

"This is the best teacher I ever had."

"This teacher certainly knows what he is doing."

"This teacher makes it fun to study things."

"This teacher never slaps or handles us roughly.

TABLE IX.

Percentages and Chi-Squares for Responses of Students of "High" and of "Low" Morale Teachers for Minnesota Student Attitude Inventory Items

I. Positively Oriented Items

Item	Morale Group	No. of Students	Percentages of Responses SA[1]	A[2]	U[3]	D[4]	SD[5]
1. This teacher asks our opinion in planning work to be done.	"High"	800	10.9	52.5	16.3	14.3	6.1
	"Low"	709	10.7	51.6	15.1	16.9	5.6
2. This teacher keeps order with a fair and firm hand.	"High"	800	17.6	50.0	14.4	12.5	5.6
	"Low"	708	21.8	49.6	13.7	10.2	4.8
3. I get along well with this teacher.	"High"	799	33.8	49.2	11.1	4.3	1.6
	"Low"	709	36.0	47.4	10.2	3.9	2.5
4. I find it easy to talk to this teacher.	"High"	798	34.6	47.9	8.5	6.0	3.0
	"Low"	707	34.0	45.0	12.7	6.8	2.1
**5. This teacher never asks trick questions to show how dumb we are.	"High"	798	19.4	35.3	19.5	19.3	6.4
	"Low"	709	15.5	27.2	20.0	26.0	11.3
*7. This teacher never slaps or handles us roughly.	"High "	799	44.8	31.9	8.0	8.3	7.0
	"Low"	709	36.8	34.0	11.4	9.9	7.9

Key [1] SA - Strongly Agree. [2] A - Agree. [3] U - Undecided. [4] D - Disagree [5] SD - Strongly Disagree.

* Significant chi-square at five per cent level.
** Significant chi-square at one per cent level.

Item	Morale Group	No. of Students	Percentages of Responses SA[1]	A[2]	U[3]	D[4]	SD[5]
9. This is one of the best teachers I have ever had.	"High"	800	35.1	29.4	18.9	11.4	5.3
	"Low"	708	30.2	30.5	21.9	10.3	7.1
12. This teacher makes sure we understand our work.	"High"	800	22.8	52.4	12.8	9.6	2.5
	"Low"	708	25.0	50.7	11.6	9.9	2.8
14. This teacher really understands boys and girls my age.	"High"	798	17.9	45.5	27.4	6.6	2.5
	"Low"	708	21.3	43.5	24.2	7.6	3.4
15. Our teacher is very good at explaining things clearly.	"High"	797	21.0	53.6	15.9	7.8	1.8
	"Low"	709	21.3	48.2	17.9	8.7	3.8
**19. This teacher certainly knows what he is doing.	"High"	800	28.5	50.2	12.5	4.9	3.9
	"Low"	708	31.8	42.8	16.5	6.8	2.1
**21. This teacher makes it fun to study things.	"High"	800	12.6	38.1	28.4	15.0	5.9
	"Low"	708	14.0	29.8	30.5	18.5	7.2
23. Our teacher never gives us extra assignments as punishment.	"High"	799	20.4	35.7	11.0	23.0	9.9
	"Low"	706	18.8	33.0	12.2	22.0	14.0
*24. This teacher wants to check our work to make sure we are on the right track.	"High"	798	21.4	59.6	9.4	7.1	2.4
	"Low"	709	24.3	50.9	13.4	8.2	3.2
25. I really like this class.	"High"	799	44.3	36.4	10.4	6.4	2.5
	"Low"	706	40.4	37.2	12.8	7.1	2.6
*27. This teacher helps us get the most out of each hour.	"High"	799	16.8	50.7	17.8	11.1	3.6
	"Low"	696	14.5	46.0	24.7	12.9	1.7
**28. This teacher is cool and calm.	"High"	799	24.2	46.6	19.3	7.6	2.4
	"Low"	708	16.0	43.5	19.8	14.7	6.1
30. When I am in trouble I can count on this teacher to help.	"High"	798	18.0	36.0	26.9	11.8	7.3
	"Low"	689	18.0	34.2	26.1	13.5	8.1
33. This teacher thinks clearly.	"High"	800	24.2	56.5	12.1	4.9	2.2
	"Low"	709	22.1	53.2	13.5	8.7	2.0
35. This teacher lets us discuss things in class.	"High"	802	39.6	50.9	3.4	4.4	1.8
	"Low"	708	41.8	48.0	3.1	4.9	2.1

Item	Morale Group	No. of Students	Percentages of Responses SA[1]	A[2]	U[3]	D[4]	SD[5]
*37. This teacher makes everything seem interesting and important.	"High"	800	19.6	43.4	19.0	14.2	3.8
	"Low"	709	16.9	39.5	23.7	15.2	4.6
39. This teacher knows a lot.	"High"	800	35.9	46.6	11.6	3.2	2.5
	"Low"	708	32.1	47.2	13.4	4.4	3.0
40. This teacher is quick to see a point.	"High"	800	19.0	50.4	20.5	7.5	2.6
	"Low"	709	15.8	49.5	22.1	8.7	3.8
**42. This teacher never gets angry and shouts at us.	"High"	798	10.3	27.3	18.8	33.5	10.2
	"Low"	709	5.6	24.2	19.6	35.5	15.9
**46. This is the best teacher I have ever had.	"High"	799	25.4	22.0	29.9	16.4	6.3
	"Low"	708	19.4	21.6	34.9	16.0	8.0
49. I wish I could have this teacher next year.	"High"	800	40.0	34.2	14.6	5.2	5.9
	"Low"	704	38.8	35.1	14.2	5.3	6.7
50. This teacher has lots of fun with us.	"High"	800	24.1	50.6	15.9	6.9	2.5
	"Low"	707	27.2	50.6	13.7	5.9	2.5
**52. This teacher makes careful plans for each day's work.	"High"	798	9.8	40.1	31.7	14.5	3.9
	"Low"	708	6.5	25.8	37.6	23.6	6.5
*54. This teacher helps students when they have problems with their work.	"High"	798	35.7	52.1	5.9	4.4	1.9
	"Low"	708	37.6	45.6	6.2	7.5	3.1
57. This teacher always takes time to find out your side of a difficulty.	"High"	798	15.5	48.4	21.4	11.6	3.0
	"Low"	707	17.1	46.7	19.7	12.6	4.0
58. This teacher never pushes or shakes us in anger.	"High"	795	31.7	37.0	10.7	12.7	7.9
	"Low"	704	29.0	35.9	13.2	12.8	9.1
60. This teacher likes to hear students' ideas.	"High"	796	28.6	54.0	10.4	4.3	2.6
	"Low"	708	31.9	46.5	13.0	5.2	3.4
**62. We behave well in this class even when the teacher is out of the room.	"High"	787	3.9	22.1	26.7	27.7	19.6
	"Low"	704	5.5	13.4	26.7	33.0	21.4

II. Negatively Oriented Items

Item	Morale Group	No. of Students	Percentages of Responses SA[1]	A[2]	U[3]	D[4]	SD[5]
6. Most of us get pretty bored in this class.	"High"	798	5.5	10.2	15.5	34.1	34.7
	"Low"	707	6.6	7.6	12.7	39.2	33.8
8. No one dares talk back to this teacher.	"High"	799	11.4	24.3	25.2	28.5	10.6
	"Low"	709	10.2	28.6	24.7	28.5	8.0
10. I just don't trust this teacher.	"High"	800	4.0	2.9	7.1	27.5	58.5
	"Low"	708	2.7	4.0	7.2	23.3	62.6
*11. It is easy to fool this teacher.	"High"	798	5.5	8.4	14.2	43.7	28.2
	"Low"	708	4.2	6.5	13.3	40.3	35.7
**13. This teacher often sends boys and girls out of the room as punishment.	"High"	799	2.5	11.0	11.1	39.9	35.4
	"Low"	708	5.9	14.0	10.2	34.6	35.3
16. Frankly we don't pay attention to this teacher.	"High"	800	2.6	10.6	12.5	50.0	24.5
	"Low"	709	2.7	10.6	13.1	45.8	27.8
17. This teacher has lost the respect of the class.	"High"	800	5.0	8.1	9.5	32.6	44.8
	"Low"	707	4.5	8.8	11.9	31.0	43.8
18. Sometimes things "get out of control" in this class.	"High"	800	6.5	29.1	16.8	30.5	17.1
	"Low"	707	8.6	30.7	14.0	32.3	14.4
20. This teacher often bawls you out in front of the class.	"High"	797	8.8	24.9	13.0	36.1	17.3
	"Low"	708	10.7	27.0	14.6	32.1	15.7
22. This teacher has some special favorites or "teacher's pets."	"High"	800	14.6	17.4	19.2	26.8	22.0
	"Low"	709	14.4	14.8	18.3	25.0	27.5
26. Sometimes I think this teacher is deaf.	"High"	799	5.0	9.1	10.5	35.6	37.8
	"Low"	709	3.8	9.9	9.4	35.8	41.0
29. In this class we fool around a lot in spite of the teacher.	"High"	798	9.1	26.9	16.7	30.6	16.7
	"Low"	709	9.2	25.0	16.8	31.2	17.9
**31. This teacher becomes confused easily.	"High"	800	3.0	5.6	14.6	46.4	30.4
	"Low"	709	4.4	10.2	14.4	38.6	32.4
**32. This teacher will punish the whole class when he can't find out who did something bad.	"High"	800	6.6	21.9	20.0	30.4	21.1
	"Low"	689	8.7	19.3	19.9	33.4	18.7

Item	Morale Group	No. of Students	Percentages of Responses SA[1]	A[2]	U[3]	D[4]	SD[5]
34. Some of the students are smarter than this teacher.	"High"	800	3.5	7.1	10.9	32.2	46.2
	"Low"	709	6.1	6.9	10.0	27.5	48.2
36. It is fun to see how much we can whisper before we get caught.	"High"	799	6.4	14.1	17.4	37.2	24.9
	"Low"	709	6.2	11.8	18.6	40.2	23.0
38. I wish I could get even with this teacher.	"High"	800	2.6	4.5	9.9	32.9	50.1
	"Low"	709	4.0	4.1	8.7	32.3	50.9
41. This teacher is too bossy.	"High"	799	3.0	7.5	13.5	49.1	26.9
	"Low"	705	4.0	9.5	14.0	48.1	24.4
43. We often complain just to get out of work.	"High"	799	5.1	21.4	18.1	41.0	14.3
	"Low"	708	5.6	25.6	18.8	36.7	13.3
44. If I could get away with it, I'd sure like to tell this teacher off.	"High"	799	3.6	6.3	11.4	33.2	45.4
	"Low"	707	7.1	5.5	10.2	31.5	45.7
45. This class is noisy and fools around a lot.	"High"	800	8.9	24.4	15.8	32.8	18.2
	"Low"	708	9.3	23.6	18.2	32.6	16.2
47. You can't walk around in this class without permission.	"High"	798	4.5	18.9	13.7	43.0	19.9
	"Low"	707	5.5	20.2	11.9	43.7	18.7
48. It seems that somebody is always getting punished in this class.	"High"	800	2.1	7.2	9.9	48.4	32.4
	"Low"	708	2.8	8.0	9.6	47.9	31.5
51. Sometimes just thinking about this class makes me sick.	"High"	798	2.5	7.9	7.1	35.0	47.5
	"Low"	706	3.7	7.4	9.8	34.6	44.6
53. I have had bad dreams about this class.	"High"	797	2.4	2.3	5.1	31.4	58.8
	"Low"	708	2.0	1.7	5.8	30.1	60.4
55. Frankly, we just don't obey the teacher in this class.	"High"	796	2.8	9.0	13.6	42.1	32.5
	"Low"	705	4.0	8.1	13.5	43.3	31.2
56. There is something about this class that makes me feel very uneasy.	"High"	797	2.5	8.0	10.4	45.3	33.6
	"Low"	708	3.8	7.1	10.3	47.9	30.9

Item	Morale Group	No. of Students	Percentages of Responses SA[1]	A[2]	U[3]	D[4]	SD[5]
59. This teacher punishes me for things I don't do.	"High"	798	3.3	8.9	10.3	37.0	40.6
	"Low"	707	5.1	8.1	8.8	33.4	44.7
*61. I think this teacher has a grudge against me.	"High"	791	3.4	6.1	8.8	33.6	48.0
	"Low"	707	5.4	4.4	12.0	28.1	50.1

B. SRA Youth Inventory (My School Section).

The "My School Section" of the SRA Youth Inventory is a measure of student feelings about the extent and intensity of the problems related to their school work. Students experiencing the greatest degree of difficulty with their school work are likely to get the highest scores on the Inventory.

Again, a 2x3x4x3 factorial experiment was carried out using the SRA Youth Inventory scores as the criterion measure. The summary of the analysis of variance is given in Table X. The mean score for students of the "high" morale group does not differ significantly from the mean score of the "low" teacher morale group. However, significant differences do occur when the SRA mean scores are compared by grades, by level of IQ, and for rural-urban groups within each morale category. A significant interaction was found to exist with respect to grades and the rural-urban groupings within morale categories. All other interactions tested were non-significant.

The actual mean scores according to grades and level of IQ are presented in Table XI. As mentioned previously, differences between grades are significant. For students in both morale groups the problems become more intense from ninth to tenth grade, and reach their peak in the eleventh grade. There is a sharp drop in the intensity of these problems

when the students reach the twelfth grade. Twelfth graders have less difficulty than the ninth graders (see Figure VI).

TABLE X.

Summary of Analysis of Variance
for SRA (My School Section) Score Means

Source	d.f.	SS	MS	F	
Grades	3	178.50	59.50	3.68	P<.05
Morale	1	.70	.70	.04	NS
Rural-Urban Group Within Morale	4	262.34	65.58	4.06	P<.05
Grades x Morale	3	56.41	18.80	1.16	NS
Grades x Rural-Urban Group Within Morale	12	452.39	37.70	2.33	P<.05
IQ	2	1415.76	757.38	46.87	P<.05
Grades x IQ	6	87.91	14.65	.91	NS
Morale x IQ	2	14.72	7.36	.46	NS
Rural-Urban Group Within Morale x IQ	8	128.68	16.08	.99	NS
Grades x Morale x IQ	6	91.47	15.24	.94	NS
Grades x Rural-Urban Group Within Morale x IQ	24	471.16	19.63	1.21	NS
Error	1467	324,643.45*	221.30*	$S_{\bar{x}}^2 = 16.1603$	
Total	1538				

* Per Observation Basis-- $\bar{n}_h = \frac{72}{5.2578} = 13.6939$

The extent of difficulty with school work is definitely related to the level of intelligence. This can be clearly seen from the graphs in Figures VII and VIII. As the IQ level of students increases, the extent and intensity of difficulty with school work decreases. For all IQ

levels, the greatest student difficulties occur in the eleventh grade except for the "medium" IQ students in the "low" teacher morale group.

TABLE XI.

Mean SRA Scores for Students of "High" and of "Low" Morale Teachers According to School Grades and Level of IQ

Students of "High" Morale Teachers

Level of IQ	Grades 9	10	11	12	All Students
"High"	41.03 (77)*	46.00 (45)	47.91 (29)	35.88 (32)	41.83 (183)
"Medium"	46.11 (152)	44.27 (132)	48.66 (95)	46.27 (90)	46.33 (469)
"Low"	49.91 (51)	51.60 (43)	55.77 (47)	50.97 (35)	52.76 (176)
All Students	45.68 (280)	46.20 (220)	50.78 (171)	44.36 (157)	46.76 (828)

Students of "Low" Morale Teachers

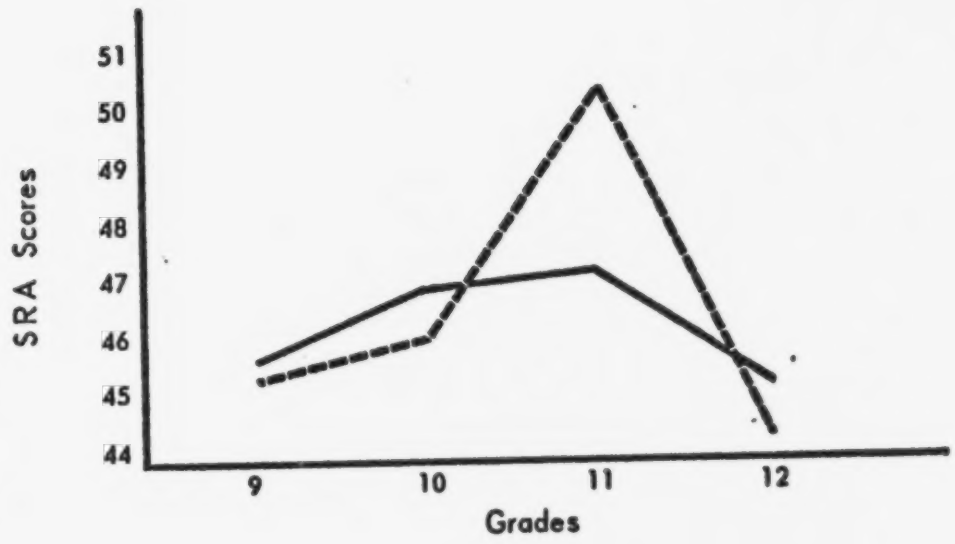
Level of IQ	Grades 9	10	11	12	All Students
"High"	37.86 (49)	39.14 (35)	44.28 (13)	40.35 (27)	40.41 (124)
"Medium"	47.42 (123)	49.71 (98)	45.56 (86)	44.69 (85)	46.59 (392)
"Low"	52.57 (58)	53.57 (47)	53.88 (51)	51.69 (39)	52.67 (195)
All Students	45.95 (230)	47.14 (180)	47.57 (150)	45.57 (151)	46.56 (711)

* Numbers in parentheses indicate number of students.

The comparisons of mean SRA scores according to the rural-urban classification are difficult to interpret. Differences in mean scores are significant among the three rural-urban groups within each morale

FIGURE VI

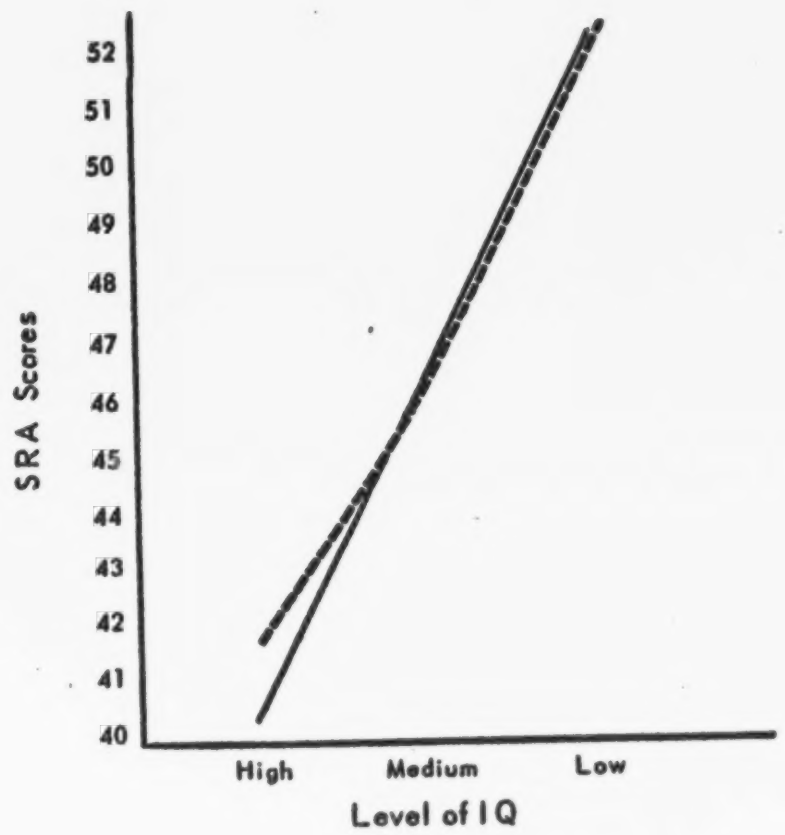
Mean SRA Scores for Students of "High" and of "Low" Morale Teachers According to School Grades



KEY: Morale ---------- "High"
_____ "Low"

FIGURE VII

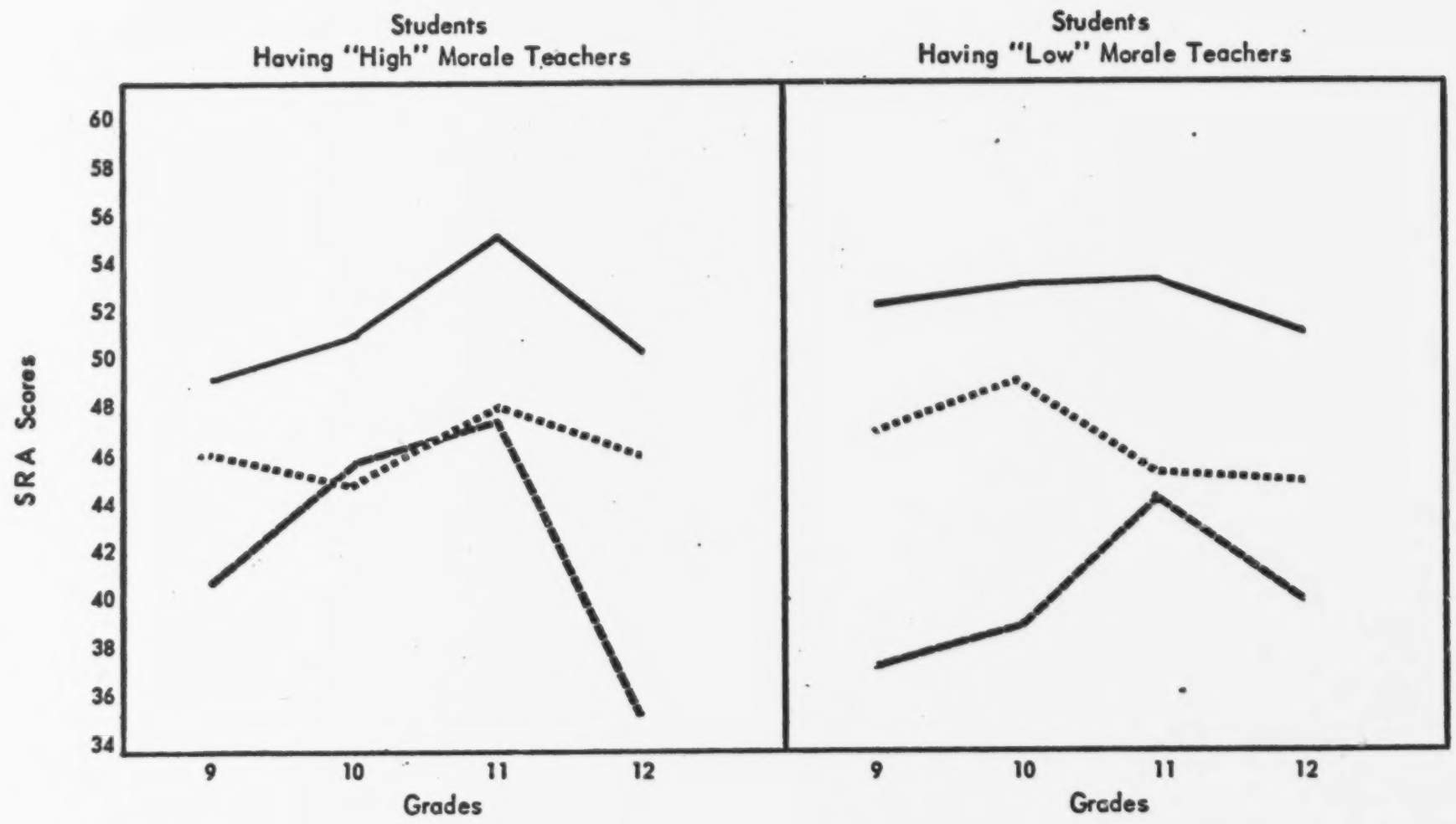
Mean SRA Scores for Students of "High" and of "Low" Morale Teachers According to Levels of IQ



KEY: Morale ---------- "High"
_____ "Low"

FIGURE VIII

Mean SRA Scores for Students of "High" and of "Low" Morale Teachers
According to School Grades and Level of IQ



KEY: Levels of IQ ——— "High"
..... "Medium"
——— "Low"

category. However, the patterns of the mean, when comparisons are made between the "high" and "low" morale groups and for levels of IQ are inconsistent (Table XII and Figures IX and X).

TABLE XII.

Mean SRA Scores for Students of "High" and of "Low" Morale Teachers According to Rural-Urban School Grouping and Level of IQ

A. Students of "High" Morale Teachers

Level of IQ	Rural-Urban School Groups: More Than 50% Rural	30-50% Rural	Less Than 30% Rural	All Students
"High"	39.22 (54)*	41.55 (78)	44.86 (51)	41.83 (183)
"Medium"	44.91 (153)	45.67 (213)	48.40 (103)	46.33 (469)
"Low"	53.54 (66)	49.81 (84)	55.86 (26)	52.07 (176)
All Students	44.89 (273)	45.68 (375)	49.70 (180)	46.76 (828)

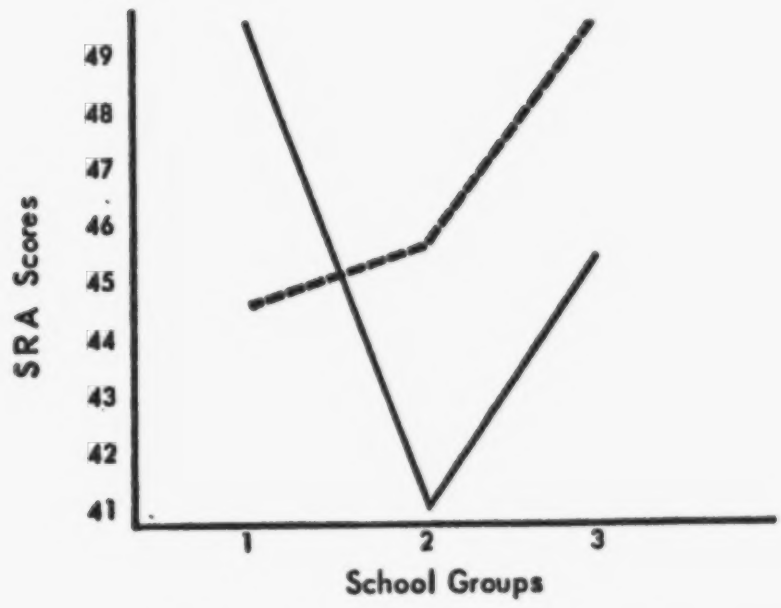
B. Students of "Low" Morale Teachers

Level of IQ	Rural-Urban School Groups: More Than 50% Rural	30-50% Rural	Less Than 30% Rural	All Students
"High"	39.12 (33)	39.91 (38)	42.20 (53)	40.41 (124)
"Medium"	48.31 (103)	44.66 (63)	46.81 (159)	46.59 (325)
"Low"	57.29 (36)	48.20 (130)	52.53 (96)	52.67 (262)
All Students	49.78 (172)	41.43 (231)	45.50 (308)	46.56 (711)

* Numbers in parentheses indicate the number of students.

FIGURE IX

Mean SRA Scores for Students of "High" and of "Low" Morale Teachers
According to Rural-Urban School Groups

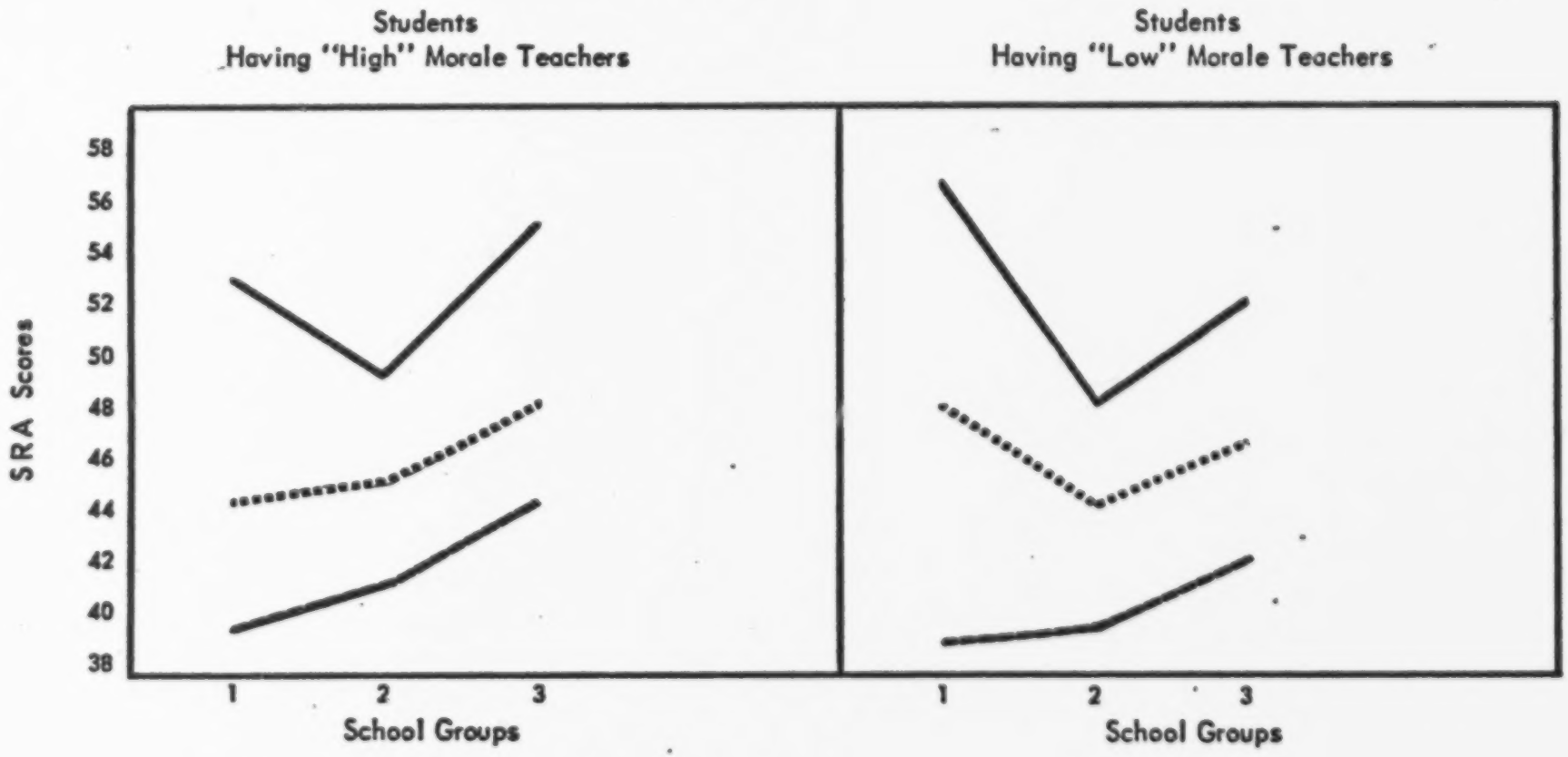


KEY: School Groups 1. More than 50% Rural
2. 30 to 50% Rural
3. Less than 30% Rural

Morale - - - - - - - - "High"
_____ "Low"

FIGURE X

Mean SRA Scores for Students of "High" and of "Low" Morale Teachers
According to Rural-Urban School Groups and Level of IQ



KEY: School Groups
1. More than 50% Rural
2. 30 to 50% Rural
3. Less than 30% Rural

Levels of IQ ——— "High"
..... "Medium"
——— "Low"

C. Academic Aptitude

In all of the comparisons made in this study, the IQ factor played an important role. From Table XIII it can be seen that differences were significant for grade level, for teacher morale groups, and for the rural-urban classification. None of the interactions tested were significant.

TABLE XIII.

Summary of Analysis of Variance of IQ Score Means

Source	d.f.	SS	MS	F	
Grade	3	61.37	20.46	6.54	$P < .05$
Morale	1	35.96	35.96	11.49	$P < .05$
Rural-Urban Groups Within Morale	4	33.58	8.40	2.68	$P < .05$
Grade x Morale	3	2.55	.85	0.27	NS
Grade x Rural-Urban Groups Within Morale	12	61.04	5.09	1.63	NS
Error	1515	270,955.74*	178.85*	$s^2_{\bar{x}} = 3.13$	
Total	1538				

* Per Observation Basis— $\bar{n}_h = \frac{24}{0.4200} = 57.14$

The mean IQ scores for students of "low" morale teachers were uniformly lower than the mean IQ scores for students of "high" morale teachers for all four grades (Table XIV and Figure XI). For the schools that were the most rural, the mean IQ scores were practically identical in the two morale groups. However, in the other rural-urban groups the mean scores in the "high" morale group were significantly higher, particularly in the most urban schools (Table XV and Figure XII).

TABLE XIV

Mean IQ Scores for Students of "High Morale and of "Low" Morale Teachers According to School Grades

Level of Morale	Grades 9	10	11	12	All Students
"High"	102.39 (280)*	99.94 (220)	97.95 (171)	100.48 (157)	100.19 (828)
"Low"	99.23 (230)	97.97 (180)	94.94 (150)	98.83 (151)	97.74 (711)
All Students	100.81 (510)	98.95 (400)	96.47 (321)	99.66 (308)	98.97 (1539)

* Numbers in parentheses indicate the number of students.

TABLE XV.

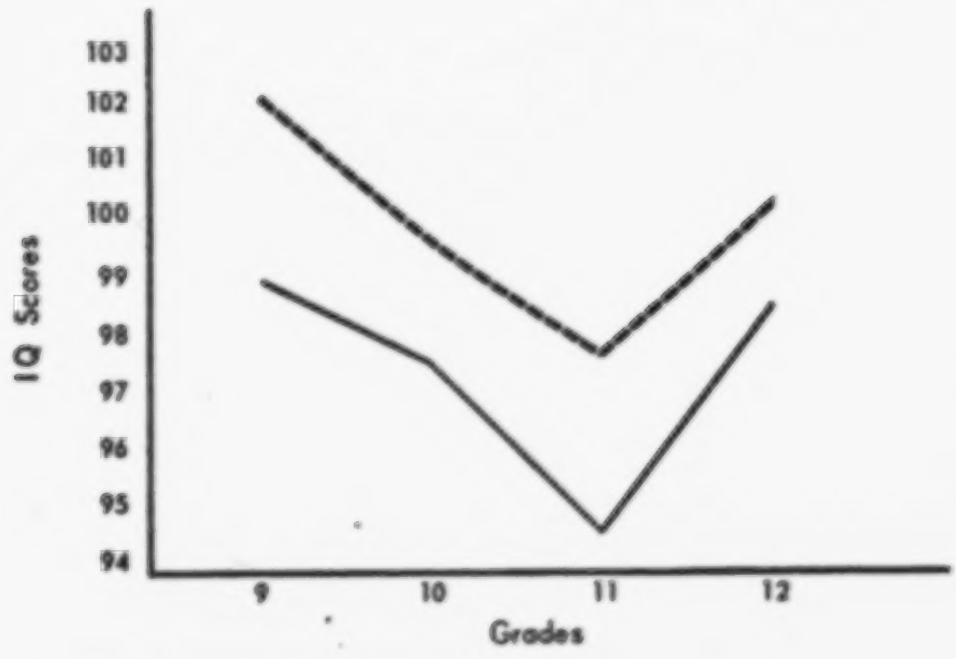
Mean IQ Scores for Students of "High" and of "Low" Morale Teachers According to Rural-Urban School Grouping

Level of Morale	Rural-Urban School Groups: More Than 50% Rural	30-50% Rural	Less Than 30% Rural	All Students
"High"	99.19 (273)*	99.34 (375)	102.30 (180)	100.19 (828)
"Low"	99.13 (172)	97.46 (231)	96.64 (308)	97.74 (711)
All Students	99.16 (445)	98.40 (606)	99.75 (488)	98.97 (1539)

* Numbers in parentheses indicate the number of students.

FIGURE XI

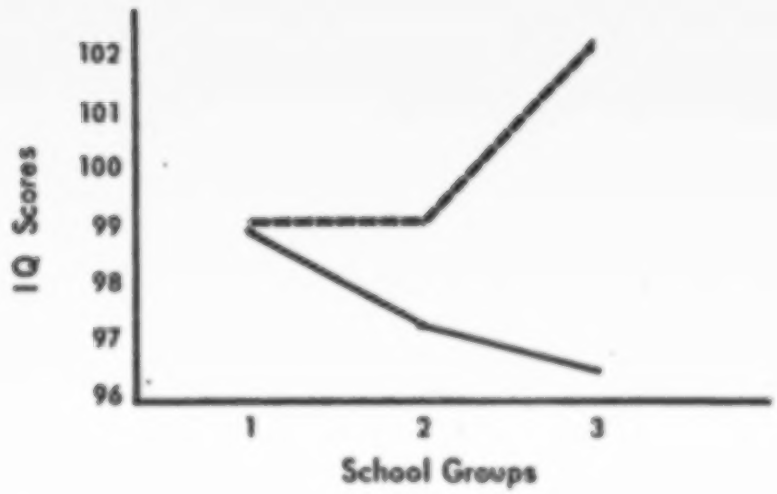
Mean IQ Scores for Students of "High" and of "Low" Morale Teachers According to School Grades



KEY: Morale ——— "High"
——— "Low"

FIGURE XII

Mean IQ Scores for Students of "High" and of "Low" Morale Teachers According to Rural-Urban School Groups



KEY: School Groups
1. More than 50% Rural
2. 30 to 50% Rural
3. Less than 30% Rural

Morale ——— "High"
——— "Low"

VI. SUMMARY AND CONCLUSIONS

The main purpose of this study was to compare selected student attitudes in vocational agriculture departments where teachers had either extremely "high" morale or extremely "low" morale. The teachers were selected on the basis of their morale scores on the Purdue Teacher Morale Inventory -- 21 in the "high" morale group, and 21 in the "low" morale group.

The following instruments were administered to all of the agriculture students taught by the teachers in the sample: (1) the Minnesota Student Attitude Inventory -- to measure student attitudes regarding their teacher, (2) the SRA Youth Inventory (My School Section) -- to indicate student feelings about the extent and intensity of problems related to their school work, and (3) the Lorge-Thorndike Intelligence Test.

The findings can be summarized as follows:

1. The MSAI mean score for students of "high" morale teachers was significantly higher than the mean score for students of "low" morale teachers. Differences in MSAI mean scores were also significantly different with respect to the IQ level of the students -- with the highest MSAI scores occurring in the "high" IQ group and the lowest in the "low" IQ group. Within each of the two morale categories mean comparisons in terms of the rural-urban classification of the schools again revealed significant differences with the scores being lowest in the most rural and the most urban schools. Differences across grades were non-significant.

   For 18 of the 62 MSAI items, the student responses were more favorable, at or beyond the five per cent level of significance, in the "high" teacher morale situations. For the remaining

items, in general, responses favored the "high" morale teachers but observed differences were not significant at the five per cent level. The greatest differences occurred for items pertaining to teacher planning, classroom control, and general classroom climate.

2. The mean score on the SRA Youth Inventory (My School Section) for the students of "high" morale teachers and the mean score for students of "low" morale teachers were practically identical (46.76 and 46.56). A significant difference was found to exist between SRA means for rural-urban groups within each morale category. These differences were difficult to interpret due to significant interaction of the rural-urban factor with the grade factor. The extent of difficulty with school work as measured by the SRA Youth Inventory was also significantly related to grade level. The students in the eleventh grade were experiencing most difficulty with school work. Observed differences indicate that "high" IQ students tend to have the more favorable SRA scores than "Low" IQ students.
3. In all of the comparisons made in this study, IQ played an important role. In general, the mean IQ level of students was higher in the "high" morale teacher situations. Significant differences in IQ were found to exist with respect to school grade and the rural-urban classification of the schools.

APPENDICES

APPENDIX A.

VOCATIONAL AGRICULTURE VIEWPOINT INVENTORY

Division of Education
Purdue University

The purpose of this inquiry is to discover the viewpoints of school administrators regarding Vocational Agriculture. These viewpoints will furnish a basis for studying certain aspects of Vocational Agriculture as a phase of a secondary school program.

Directions

Below are a number of statements regarding Vocational Agriculture. Please indicate your reaction to each statement by encircling the response which best represents your thinking. Please react to all statements.

Use this scale: SA - strongly agree
A - agree
D - disagree
SD - strongly disagree

1. Having a vocational agriculture program in a secondary school causes too many administrative problems ..... SA A D SD

2. The teacher of vocational agriculture should visit his students on their home farms at least three times a year ..... SA A D SD

3. Farm mechanics instruction should be given in each school that maintains a department of vocational agriculture ..... SA A D SD

4. A Future Farmers of America chapter should be organized in each school that maintains a department of vocational agriculture ..... SA A D SD

5. The Future Farmers of America organization aids students of vocational agriculture to develop desirable <u>social</u> and <u>civic</u> interests and abilities ..... SA A D SD

6. A state course of study should be developed for vocational agriculture ..... SA A D SD

7. The development of a local program of vocational agriculture depends largely upon the degree to which school administrators <u>encourage</u> and <u>support</u> the program ..... SA A D SD

8. The time needed for making home farm visits to students of vocational agriculture should be recognized as part of the agriculture teacher's load ..... SA A D SD

9. Instructional programs for adult farmers should be organized and conducted in each school that maintains a department of vocational agriculture ..... SA A D SD

10. The teacher of vocational agriculture should visit his students on their home farms in order to provide individual instruction and to supervise the student's farming program ..... SA A D SD

11. The cost of facilities and equipment for vocational agriculture can be justified ..... SA A D SD

12. Vocational agricultural courses deserve credit equal to academic courses in the secondary school curriculum ..... SA A D SD

13. Opportunities to study vocational agriculture should be provided for high school students ..... SA A D SD

14. All agricultural education for adult farmers should be provided by agricultural agencies other than the public schools .... SA A D SD

15. School owned and operated buses should be available for transporting vocational agriculture students on field trips ..... SA A D SD

16. The per pupil cost of vocational agriculture is justifiable in a public school program ..... SA A D SD

17. Departments of vocational agriculture should be maintained in Indiana high schools where such work is needed even though they are not reimbursed with federal funds ..... SA A D SD

18. Teachers of vocational agriculture should be employed for twelve months ..... SA A D SD

19. All farm boys should be required to take courses in vocational agriculture ..... SA A D SD

20. Instructional programs for young farmers should be organized and conducted in each school that maintains a department of vocational agriculture ..... SA A D SD

Form O-40

APPENDIX B.

PURDUE UNIVERSITY
Division of Education
Lafayette, Indiana

PERSONAL DATA FORM

(Please record your responses directly on this form).

1. Circle your age bracket: 20-25 26-30 31-35 36-40 41-45
   46-50 51-55 56-60 Over 60

2. Check the highest level of education you have completed.

   a. Bachelor's degree ..... ____
   b. Bachelor's degree plus 12 semester hours ..... ____
   c. Master's degree ..... ____
   d. Master's degree equivalent ..... ____
   e. More than Master's degree ..... ____

3. Circle the number of years you have been engaged in teaching, including the present year.

   1-2 3-5 6-9 10-14 15-19 20-24 25-30 More than 30

4. Circle the number of years of teaching you have completed in your present position, including the present year.

   1-2 3-5 6-9 10-14 15-19 20-24 25-30 More than 30

5. Circle the number of different school systems in which you have taught.

   1 2 3 4 5 More than 5

6. How well pleased are you with your present position? Check one of the following:

   a. Thoroughly satisfied; no desire to change at this time ..... ____
   b. Satisfied but would consider a change ..... ____
   c. Somewhat dissatisfied; would change if I could ..... ____
   d. Thoroughly dissatisfied ..... ____

7. The future of Vocational Agriculture in Indiana is encouraging. Which one of the following best indicates your opinion regarding this statement?

   a. Agree ..... ____
   b. Probably agree ..... ____
   c. Probably disagree ..... ____
   d. Disagree ..... ____

8. Are you a tenure teacher? Yes____ No____

9. If you were starting your college work over again, would you choose to specialize in Agricultural Education?

   Yes____ No____ Uncertain____

APPENDIX C.

Means and Standard Deviations of MSAI Scores for Students of "High" and of "Low" Morale Teachers by Schools

"High" Morale Teacher Schools				"Low" Morale Teacher Schools			
School Code	No. of Students	Mean	Standard Deviation	School Code	No. of Students	Mean	Standard Deviation
H1-3	49	254.80	23.68	L1-29	41	250.20	25.99
H1-8	23	224.96	34.84	L1-26	36	247.11	25.82
H1-20	41	224.54	28.56	L1-9	29	235.21	25.66
H1-54	26	215.61	39.40	L1-16	24	233.25	21.80
H1-42	40	204.58	29.52	L1-46	19	218.95	23.77
				L1-13	35	215.71	43.58
H2-10	42	249.88	20.40	L1-11	32	212.12	24.62
H2-23	68	248.21	22.73	L1-22	47	210.29	32.28
H2-47	31	242.42	24.01	L1-41	19	204.90	23.02
H2-45	46	237.67	30.18	L1-12	22	187.33	35.52
H2-43	15	234.73	24.75				
H2-7	61	233.28	30.91	L2-53	36	249.17	23.29
H2-40	41	222.83	26.53	L2-15	29	238.86	22.59
H2-34	29	222.45	19.85	L2-6	52	237.86	23.80
H2-19	42	199.64	32.18	L2-35	45	230.07	24.47
				L2-48	26	228.81	32.74
H3-2	29	238.21	29.77	L2-36	42	227.33	26.55
H3-27	38	237.66	25.86				
H3-37	34	236.32	27.55	L3-39	28	248.43	24.60
H3-25	73	235.93	25.86	L3-60	21	233.95	25.45
H3-18	25	232.56	28.01	L3-1	52	227.62	28.36
H3-38	41	231.85	26.90	L3-32	41	225.46	35.04
H3-33	33	224.18	17.65	L3-5	30	220.83	34.30

APPENDIX D.

Means and Standard Deviations of SRA Youth Inventory (My School Section) Scores for Students of "High" and of "Low" Morale Teachers by Schools

"High" Morale Teacher Schools				"Low" Morale Teacher Schools			
School Code	No. of Students	Mean	Standard Deviation	School Code	No. of Students	Mean	Standard Deviation
H1-54	26	43.15	13.28	L1-26	36	40.56	14.25
H1-3	49	43.49	11.13	L1-41	19	41.26	13.17
H1-42	40	49.80	16.24	L1-9	29	42.17	10.15
H1-8	23	51.17	13.01	L1-16	24	43.08	15.26
H1-20	41	51.59	13.20	L1-29	41	45.00	15.18
				L1-11	32	45.66	14.58
				L1-12	22	53.05	15.63
H2-43	15	29.93	15.87	L1-22	47	53.85	11.94
H2-10	42	41.57	14.25	L1-13	35	55.69	21.36
H2-7	61	41.59	17.29	L1-46	19	56.11	16.34
H2-34	29	43.03	13.90				
H2-47	31	44.23	14.32				
H2-19	42	45.60	13.96	L2-53	36	42.92	14.61
H2-23	68	46.22	13.93	L2-6	52	44.14	14.92
H2-40	41	50.95	15.43	L2-36	42	44.24	13.29
H2-45	46	56.87	13.21	L2-35	45	45.53	12.95
				L2-48	26	45.54	14.46
				L2-15	29	47.31	12.45
H3-2	29	40.83	16.31				
H3-37	34	41.50	16.82				
H3-33	33	44.70	15.06	L3-32	41	46.34	16.02
H3-27	38	44.87	15.65	L3-1	52	46.79	17.01
H3-18	25	45.48	11.33	L3-60	21	48.62	17.80
H3-38	41	46.34	16.60	L3-5	30	48.80	19.69
H3-25	73	48.89	15.88	L3-39	28	51.50	17.94

APPENDIX E.

Means and Standard Deviations of IQ Scores for Students of "High" and of "Low" Morale Teachers by Schools

"High" Morale Teacher Schools

School Code	No. of Students	Mean	Standard Deviation
H1-3	49	111.49	13.94
H1-8	23	99.48	11.87
H1-20	41	99.02	15.22
H1-42	40	98.98	11.21
H1-54	26	97.85	23.98
H2-10	42	103.88	12.54
H2-34	29	102.45	9.73
H2-47	31	101.61	13.14
H2-43	15	101.20	11.96
H2-40	41	100.90	10.83
H2-7	61	99.66	14.63
H2-19	42	97.91	12.16
H2-23	68	96.78	10.82
H2-45	46	94.74	10.76
H3-37	34	104.85	14.42
H3-38	41	104.20	12.63
H3-27	38	99.82	11.37
H3-33	33	99.12	14.03
H3-18	25	96.60	11.44
H3-2	29	96.35	18.51
H3-25	73	95.62	13.75

"Low" Morale Teacher Schools

School Code	No. of Students	Mean	Standard Deviation
L1-41	19	103.79	8.79
L1-9	29	100.97	10.47
L1-13	35	99.97	11.10
L1-11	32	98.84	16.78
L1-12	22	97.95	15.71
L1-29	41	96.83	10.22
L1-26	36	96.53	16.90
L1-16	24	94.67	17.53
L1-22	47	92.71	12.29
L1-46	19	91.74	13.64
L2-6	52	100.78	13.78
L2-48	26	100.46	17.87
L2-53	36	98.19	11.53
L2-15	29	96.35	13.16
L2-35	45	95.82	12.94
L2-36	42	93.76	12.00
L3-39	28	104.89	10.95
L3-1	52	101.02	12.13
L3-5	30	96.83	13.18
L3-32	41	96.66	14.68
L3-60	21	95.33	10.10